

REMARKS

I. Introduction

Claims 12-23 and 25 are pending in the application. In the final Office Action dated February 18, 2010, the Examiner maintained the rejection of claims 18 and 25 under 35 U.S.C. § 112; maintained the rejection of claims 12-14, 18, 19, 21, and 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 4,214,918 ("Gat"); maintained the rejection of claims 16, 17, 22, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Gat in view of U.S. Pat. No. 4,509,461 ("Fan"); maintained the rejection of claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Gat in view of U.S. Pat. No. 5,882,958 ("Wanlass"); and maintained the rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Gat in view of Japanese Pat. No. JP361030027A ("Higuchi"). In this Amendment, Applicants have amended claims 12, 14, 22, 23, and 25, and cancelled claims 18 and 19.

II. Rejection Under 35 U.S.C. § 112, First Paragraph

In order to advance prosecution, Applicants have cancelled claim 18 and amended claim 25 to remove the term "approximately."

III. Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Amended independent claims 12, 23, and 25 each generally recite forming a finely patterned metal-containing interconnect having a first grain size on a carrier material, the interconnect bounded on a first side by a first portion of a seed layer and the interconnect bounded on a second side that is opposite to the first side by a second portion of the seed layer. Amended independent claims 12, 23, and 25 each additionally generally recite producing a locally delimited thermal region in the finely patterned metal-containing interconnect and moving the locally delimited thermal region in a direction of the interconnect and parallel to the first and second portions of the seed layer in such a way that a recrystallization of the interconnect is carried out for the purpose of producing an interconnect having a second grain size, the second grain size being enlarged exclusively with respect to the first grain size such that the second grain

size is lengthened with respect to the first grain size in the direction of the movement of the thermal region. Gat fails to teach these elements.

Gat is directed to a method of forming polycrystalline semiconductor interconnections, resistors, and contacts by applying a radiation beam. In the cited portions of Gat, a laser beam is scanned across a semiconductor material and substrate. After the scanning the average grain size increases. As acknowledged by the Examiner, in Gat, the size of the grain is enlarged in all directions relative to the smaller grain. (See Office Action dated Feb. 18, 2010, page 5). Gat fails to teach moving a locally delimited thermal region in a direction of an interconnect in such a way that a second grain size is enlarged exclusively with respect to the first grain size such that the second grain size is lengthened with respect to the first grain size in the direction of movement of the thermal region as recited in amended independent claims 12, 23, and 25.

Gat fails to teach producing a locally delimited thermal region in the finely patterned metal-containing interconnect and moving the locally delimited thermal region in a direction of the interconnect and parallel to the first and second portions of the seed layer in such a way that a recrystallization of the interconnect is carried out for the purpose of producing an interconnect having a second grain size, the second grain size being enlarged exclusively with respect to the first grain size such that the second grain size is lengthened with respect to the first grain size in the direction of the movement of the thermal region. For at least this reason, Gat does not anticipate amended independent claims 12, 23, and 25 or any claim that depends on claim 12. Similarly, for at least this same reason, the combinations of Gat, Fan, Wanlass, and Higuchi as contemplated by the Examiner do not render unpatentable amended independent claims 12, 23, and 25 or any claim that depends on claim 12.

IV. Conclusion

In view of the amendments to the claims and the foregoing remarks, Applicants submit that the pending claims are in condition for allowance. Reconsideration is therefore respectfully requested. If there are any questions concerning this Response, the Examiner is asked to phone the undersigned attorney at (312) 321-4200.

Respectfully submitted,

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